

United States Patent and Trademark Office

UNITED STATES DEPARTMENT OF COMMERCE United States Patent and Trademark Office Address: COMMISSIONER FOR PATENTS P.O. Box 1450 Alexandria, Virginia 22313-1450 www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/604,192	06/30/2003	Jason S. Katcha	GEMS8081.173	1191
27061	7590 04/08/2005		EXAMINER	
	SKI PATENT SOLUTIO	HO, ALLEN C		
14135 NOR? MEQUON,	TH CEDARBURG ROAD WI 53007		ART UNIT	PAPER NUMBER
WEQUON,	VI 33077		2882	
			DATE MAIL ED: 04/09/200	ς.

Please find below and/or attached an Office communication concerning this application or proceeding.

	•			H'
		Application No.	Applicant(s)	17
Office Action Summary		10/604,192	KATCHA ET AL.	
		Examiner	Art Unit	
		Allen C. Ho	2882	
Ti Period for R	he MAILING DATE of this communication eply	n appears on the cover sl	neet with the correspondence add	ress
THE MAI - Extension after SIX (- If the peric - If NO peric - Failure to Any reply	TENED STATUTORY PERIOD FOR R LING DATE OF THIS COMMUNICATION of time may be available under the provisions of 37 C of time may be available under the provisions of 37 C of time may be available under the provisions of 37 C of time may be available under the provisions of 37 C of time may be available under this communication of the provision of	ON. FR 1.136(a). In no event, however n. a reply within the statutory minimu eriod will apply and will expire SIX statute, cause the application to be	may a reply be timely filed m of thirty (30) days will be considered timely. (6) MONTHS from the mailing date of this comcome ABANDONED (35 U.S.C. § 133).	nmunication.
Status				
2a)⊠ Thi 3)⊡ Sin	sponsive to communication(s) filed on going action is FINAL . 2b) 2b) ce this application is in condition for all sed in accordance with the practice under	This action is non-final. owance except for forma		merits is
Disposition	of Claims			
4a) 5)⊠ Cla 6)⊠ Cla 7)⊠ Cla	nim(s) <u>1,3-12 and 14-24</u> is/are pending Of the above claim(s) is/are with nim(s) <u>1 and 3-7</u> is/are allowed. nim(s) <u>8-10,14,18,19 and 21-24</u> is/are relation(s) <u>11,12,15-17 and 20</u> is/are object nim(s) are subject to restriction a	ndrawn from consideration ejected. ed to.		
Application	Papers			
10)⊠ The App Rep	e specification is objected to by the Exale drawing(s) filed on 30 June 2003 is/ar objection to blacement drawing sheet(s) including the cost of oath or declaration is objected to by the	e: a)⊠ accepted or b)□ o the drawing(s) be held in orrection is required if the d	abeyance. See 37 CFR 1.85(a). rawing(s) is objected to. See 37 CFF	
Priority und	er 35 U.S.C. § 119			
a)	nowledgment is made of a claim for for All b) Some * c) None of: Certified copies of the priority docur Copies of the certified copies of the application from the International Buthe attached detailed Office action for a	ments have been receive ments have been receive priority documents have ureau (PCT Rule 17.2(a)	ed. ed in Application No e been received in this National S)	itage
Attachment(s) 1) Notice of	References Cited (PTO-892)	4) 🦳 int	erview Summary (PTO-413)	
2) Notice of 3) Information	Draftsperson's Patent Drawing Review (PTO-94 on Disclosure Statement(s) (PTO-1449 or PTO/S (s)/Mail Date	B/08) Pa	per No(s)/Mail Date tice of Informal Patent Application (PTO-ner:	152)

Application/Control Number: 10/604,192

Art Unit: 2882

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 8-10, 14, 18, 19, and 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada et al. (U. S. Patent No. 4,969,171).

With regard to claims 8-10, Yamada et al. disclosed a CT imager comprising: a rotatable gantry having an imaging bore disposed therethrough, and a stationary base supporting the gantry; a slip ring (6) disposed in the rotatable gantry and electrically connected to an x-ray tube (9) and an HV tank (7, 8); and a power conditioner (3) external to the gantry to receive a DC voltage and generate an AC voltage waveform that is applied to the HV tank through the slip ring, the power conditioner having an inverter (3) connected to a series-resonant circuit (2) that is connected (through the inverter) to the slip ring.

With regard to claim 14, Yamada *et al.* disclosed the CT imager of claim 8, wherein the at least one resonant circuit is configured to limit frequency content of current and voltage waveforms on the slip ring (it is a frequency band-pass filter).

With regard to claims 18 and 21-24, Yamada et al. disclosed a CT scanner comprising: a rotatable x-ray tube (9) and a rotatable HV tank (7, 8); a slip ring (6) to transfer current to the HV tank; a stationary base having an inverter (3) to supply AC power to the slip ring for

transference to the HV tank; and the inverter having at least one resonant circuit (2, an LC

Page 3

circuit) connected (through the inverter) to the slip ring.

With regard to claim 19, Yamada *et al.* disclosed the CT scanner of claim 18, further comprising a transformer (71, 81) connected to the at least one resonant circuit and the slip ring.

Allowable Subject Matter

3. Claims 1 and 3-7 are allowed.

4. Claims 11, 12, 15-17, and 20 are objected to as being dependent upon a rejected base

claim, but would be allowable if rewritten in independent form including all of the limitations of

the base claim and any intervening claims.

5. The following is a statement of reasons for the indication of allowable subject matter:

With regard to claims 1 and 3-7, although the prior art discloses x-ray generators for a CT

scanner comprising a slip ring to transfer power to a rotating high voltage (HV) tank, and the

prior art (Steigerwald et al.) discloses an x-ray generator for a CT scanner comprising a

stationary inverter having an H-bridge configuration, the configuration having a pair of outputs

such that at least one output is connected to a resonant circuit, it fails to teach or fairly suggest an

x-ray generator for a CT scanner as claimed.

Response to Arguments

6. Applicant's arguments filed 07 February 2005 with respect to claims 1, 3-12, and 14-24 have been fully considered and are persuasive. The rejections of claims 1, 3-12, and 14-24 under

35 U.S.C. 102 (b) and/or 103(a) in view of Tanaka (U. S. Patent No. 4,995,069) have been withdrawn.

7. Applicant's arguments filed 07 February 2005 have been fully considered but they are not persuasive.

The applicants argue Yamada *et al.* failed to disclose an inverter having at least one resonant circuit connected to the slip ring. In particular, the applicants contend that the resonant circuit of the inverter, not simply an inverter output, is connected to the slip ring. The examiner respectfully disagrees with this assertion. The examiner would like to point out that the claims do not claim how the resonant circuit is connected to the slip ring. Specifically, Yamada *et al.* disclosed a resonant circuit that is connected to the slip ring through the inverter. Thus, the resonant circuit is connected to the slip ring. In other words, all elements in the circuit are connected to each other.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this

final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Allen C. Ho whose telephone number is (571) 272-2491. The

examiner can normally be reached on Monday - Friday from 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Edward J. Glick can be reached at (571) 272-2490. The fax phone number for the

organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Allen C. Ho

Primary Examiner

allen C. Ho

Art Unit 2882

05 April 2005